

1 What is claimed is:

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3 1. A method for correcting a half tone pulse width count, the method comprising:  
 4 determining the half tone pulse width count;  
 5 determining a half tone level; and  
 6 calculating a corrected half tone pulse width count based on the half tone pulse width  
 7 count and the half tone level.

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9 2. The method of claim 1, wherein at least one of the half tone pulse width count, the  
 10 half tone level and the corrected half tone pulse width count may be determined for one or  
 11 more of a pixel, a line, a page, a print job, and a usable lifespan of a toner cartridge.

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13 3. The method of claim 1, wherein one or both of a statistical regression equation and a  
 14 lookup table are used for the calculating step.

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16 4. The method of claim 3, wherein the lookup table is based on the statistical regression  
 17 equation.

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19 5. The method of claim 1, further comprising:  
 20 determining a pulse width count;  
 21 calculating a toner usage value based on the pulse width count and the corrected half  
 22 tone pulse width count.

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24 6. The method of claim 5, further comprising:  
 25 calculating a toner remaining value based on a predetermined amount of toner and the  
 26 toner usage value.

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- 1    **7.**     A computer readable medium on which is embedded computer software capable of  
2    automatically correcting a half tone pulse width count, the software comprising:  
3         determining the half tone pulse width count;  
4         determining a half tone level; and  
5         calculating a corrected half tone pulse width count based on the half tone pulse width  
6    count and the half tone level.  
7  
8    **8.**     The computer readable medium of claim 7, wherein at least one of the half tone pulse  
9    width count, the half tone level and the corrected half tone pulse width count may be  
10   determined for one or more of a pixel, a line, a page, a print job, and a usable lifespan of a  
11   toner cartridge.  
12  
13   **9.**     The computer readable medium of claim 7, wherein one or both of a statistical  
14   regression equation and a lookup table are used for the calculating step.  
15  
16   **10.**    The computer readable medium of claim 9, wherein the lookup table is based on the  
17   statistical regression equation.  
18  
19   **11.**    The computer readable medium of claim 7 further comprising:  
20         determining a pulse width count;  
21         calculating a toner usage value based on the pulse width count and the corrected pulse  
22   width count.  
23  
24   **12.**    An apparatus for correcting a half tone pulse width count comprising:  
25         a processor system configured to determine the half tone pulse width count for one or  
26   more pixels within a print job, wherein the processor system is further configured to  
27   determine a half tone level for the one or more pixels and wherein the processor system is  
28   further configured to calculate a corrected half tone pulse width count based on the half tone  
29   pulse width count and the half tone level.  
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**13.** The apparatus of claim 12, wherein the processor system comprises at least one processor associated with one or more of a PC, a print spooler, a printer and a network component.

**14.** The apparatus of claim 13, wherein the processor system is an application specific integrated circuit contained within the printer.

**15.** The apparatus of claim 12, wherein the processor system is further configured to determine a pulse width count for one or more substantially solid pixels within a print job.

**16.** The apparatus of claim 15, wherein the processor system is further configured to calculate a toner usage value based on the pulse width count and the corrected half tone pulse width count.

**17.** The apparatus of claim 16, further comprising a memory, the memory configured to store one or more of the toner usage value, the corrected half tone pulse width count, the half tone pulse width count, the half tone level, and the pulse width count.

**18.** The apparatus of claim 17, further comprising a toner cartridge, the toner cartridge configured to hold a predetermined amount of toner and dispense measured amounts of toner as required.

**19.** The apparatus of claim 18, wherein the processor system is further configured to calculate a toner remaining value based on the predetermined amount of toner and the toner usage value.

**20.** The apparatus of claim 19, wherein the toner cartridge comprises a non-volatile memory, whereby the non-volatile memory is configured to store data associated with one or more of the predetermined amount of toner, the toner remaining value and the toner usage value.